

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/016561 A1

(51) International Patent Classification⁷: **B07C 5/342,**
B07B 9/00

(21) International Application Number:
PCT/US2003/022547

(22) International Filing Date: 21 July 2003 (21.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): **PIRELLI & C. S.p.A.** [IT/IT]; Via Gaetano Negri, 10, 20123 Milano (IT).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **MAUNDER, Andrew** [GB/US]; 172 Orchard Park Drive, Greenwood, SC 29649 (US).

(74) Agent: **GARRETT, Arthur, S.**; Finnegan, Henderson, Farabow, Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

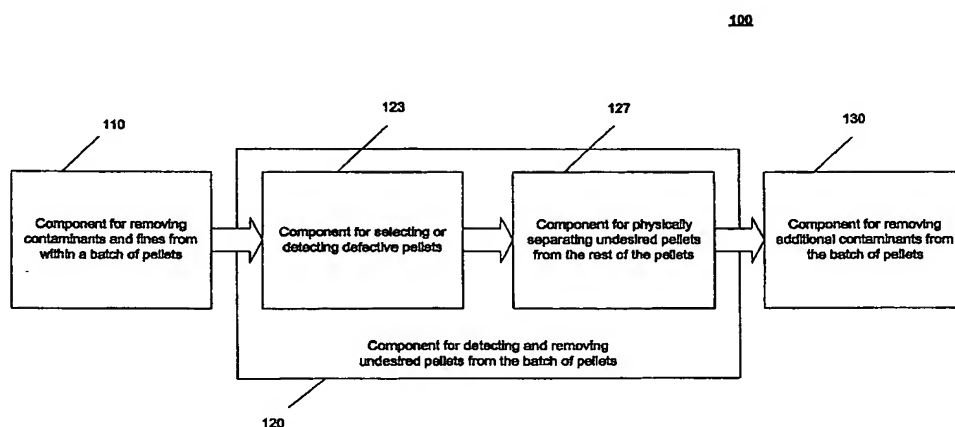
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEMS AND METHODS FOR CLEANING A BATCH OF GRANULAR MATERIAL



(57) Abstract: An apparatus (100) and method cleans a batch of pellets or granules prior to use in an extrusion process. Loose contaminants having material characteristics that are undesired for the extruded product are first removed (110) from the batch using a deduster. The deduster may also remove uncontaminated fines and fluff from the batch. Pellets that are defective or otherwise undesired for the extrusion process as well as other loose particle contaminants can then be efficiently detected and removed (120) without the risks of fines clogging the apparatus or shielding the detection process. Magnets may help remove (130) particulates of ferrous material before or after the removal (120) of defective pellets. The resulting batch of pellets helps to produce extruded materials of higher quality, such as insulation material in electrical cables.

WO 2005/016561 A1